SAMSUNG

Digital HD STB

User Guide

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SAFETY CONCERNS

For product safety and correct operation, the following information shall be read before the installation and operation.

Conventions

WARNING
Provides information or instructions that you should follow in order to avoid personal injury or fatality.

CAUTION
Provides information or instructions that you should follow in order to avoid a service failure or damage to the product.

NOTE
Indicates additional information for reference.

Symbols

Caution
Indication of a general caution

Restriction
Indication for prohibiting an action for the product

Instruction
Indication for performing a specific required action

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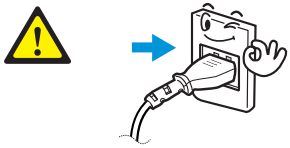
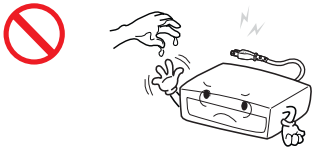
WARNING

Power



Insert the power plug firmly.

Failure to do so may cause a fire.

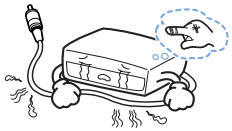


Do not touch the main body, power cord, or power plug with wet hands.

Doing so may cause an electric shock.

Do not connect multiple devices to a single outlet simultaneously.

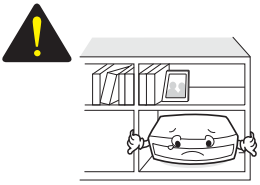
Doing so may cause a fire.



If video/sound cable generates heat after connection, pull out the power cord and contact customer service immediately.

Failure to do so may cause a fire.

Installation/Maintenance



Install the product in an area with good ventilation.

Not doing so may cause product malfunction resulting from the rise of inside temperature.

Do not install in humid or dusty areas, and avoid installing near heating devices.

Doing so may cause a fire or electric shock.

Keep flammable substances or sprays away from the STB.

Failure to do so may cause a fire or an explosion.

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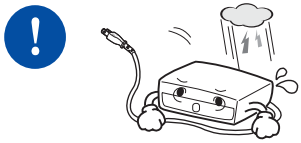
Installation/Maintenance

Do not place heavy objects on this product.

Doing so may cause product damage or a fire resulting from the rise in temperature.

Do not cover the top.

Doing so may cause product malfunction resulting from the rise of inside temperature.



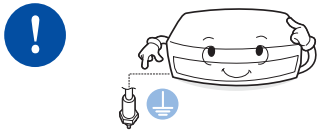
Pull out the power plug during thunderstorms or when not used for a prolonged period of time.

Failure to do so may cause an electric shock or a fire.

Pull out the power plug at once and contact customer service if unusual noise, smell, or smoke comes out.

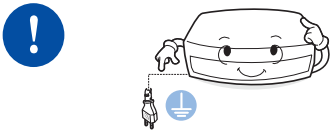
Failure to do so may cause an electric shock or a fire.

General



Check if the coaxial cable is correctly grounded before connecting to the STB.

Non-grounded cable may cause a fire.



Ask the installation engineer to check if the STB to be connected is correctly grounded.

A non-grounded STB may cause a fire.

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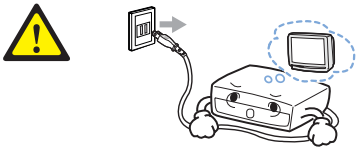
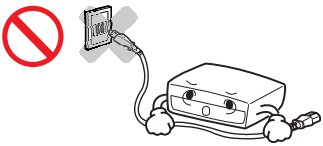
CAUTION

Power



Connect your TV after powering off the TV and the STB by pulling out the power plugs.

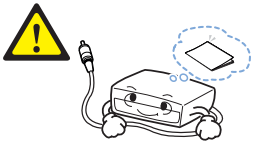
Failure to do so may cause a wrong connection with the TV or product damage.



Do not insert the power plug before connecting the power cable to the product.

Doing so may cause product damage.

Installation/Maintenance

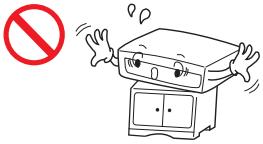


Install the product correctly complying with the instructions in the user guide.

Failure to do so may cause a product malfunction or reduce its life time.

Do not spray water directly on the unit and do not use chemical solvents such as wax, benzene, thinner, mosquito spray, aerosol, alcohol, lubricant or detergent.

Doing so may cause product damage.

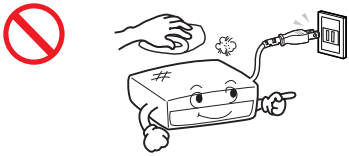


Do not place the product on unstable support.

The product may fall down from the support and cause product damage.

Do not disassemble, repair, or remodel.

Doing so may cause product damage.



Wipe the product with a soft and dry cloth when cleaning.

Failure to do so may cause product damage.

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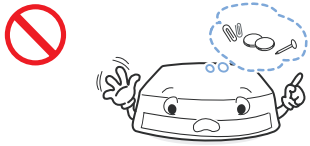
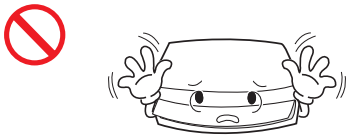
Installation/Maintenance



Do not place any metal items such as pins, paper clips or coins on the top of the product.

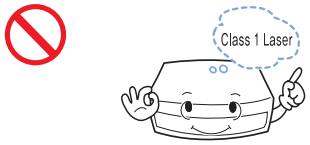
Doing so may cause product damage.



Risk of Electric Shock, Do NOT OPEN.

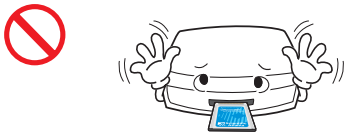
Doing so may cause an electric shock.

General



Class 1 Laser Product.

This product applies 21 CFR 1040.10 (2002), Clause (c), (d) and (e) standard.



Do not remove the CableCARD™ from the STB.

Doing so may cause a CableCARD™ or service failure.

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BEFORE USING THE STB

Digital HD STB

Digital HD OCAP STB (Digital High-Definition OpenCable™ Set-top Box) provides high quality video and audio broadcasting, and interactive services including Video-On-Demand.

Digital HD STB (SMT-H3050) provides the following functions.

- An MPEG decoder capable of processing HD/SD stream
- SCTE55-1, 55-2 and DOCSIS™ Cable Modem for OOB Signaling
- Digital AV transmission, such as IEEE1394 and HDMI
- Content Protection
- CableCARD™ Interface for CAS
- OCAP™ 1.0 application platform

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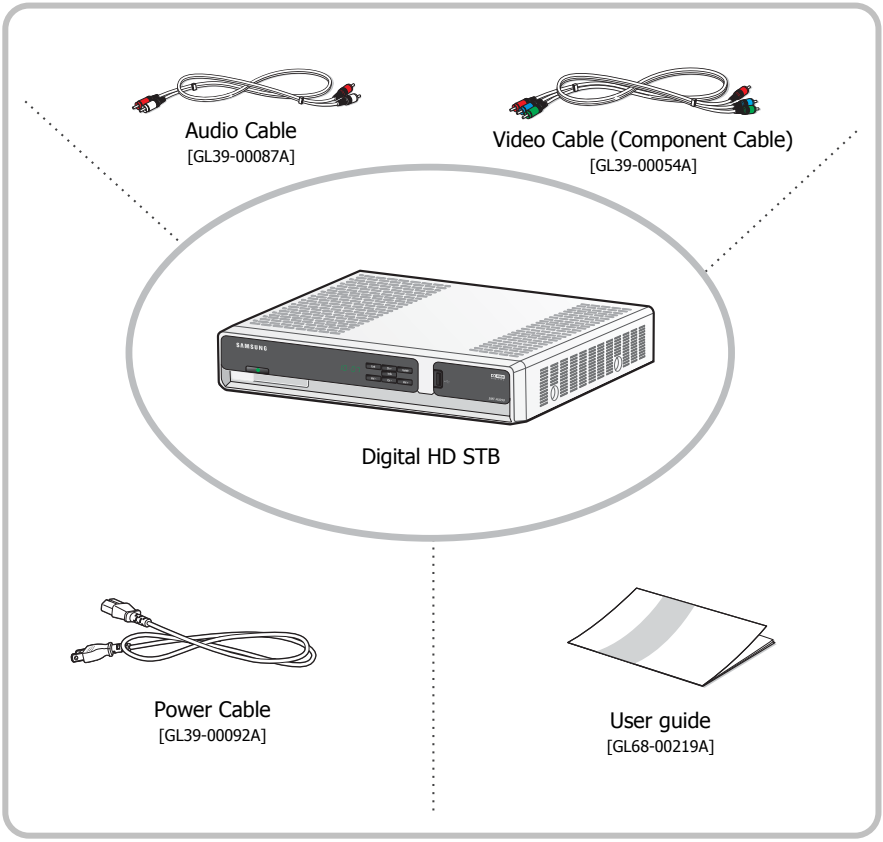
Checking Items

Please make sure the following items are contained in your product package box.



(The product image may differ from the actual product.)

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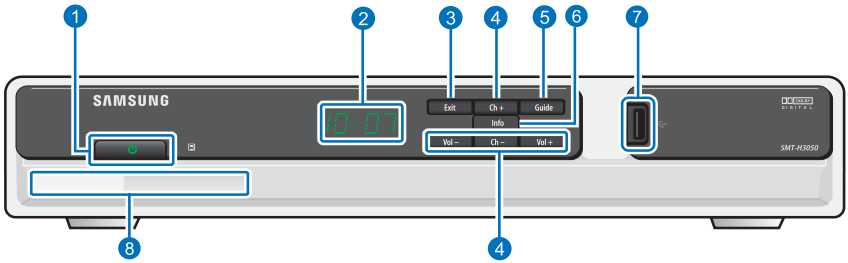
Names and Functions

Names and functions on the front and rear panel of Set-top box are described as follows:

Front Panel

The buttons and LEDs on the front are described as follows:



Name	Function
❶ **[Active/Standby] Button**	Enable/Disable Standby mode. When Standby mode is on, the LED display is dimmed and all the A/V outputs are disabled. In normal operation mode, the LED in the button is illuminated. - Active Mode: The set-top box is in operation mode and you can get broadcasting. - Standby Mode: The power is supplied and it is in ready to active status.
❷ **Time/Channel Display**	- Time: Displays the current time. - Channel: Displays the channel number.
❸ **Exit Button**	Exit menus, guide and program information.
❹ **Ch +/-, Vol +/- Button**	[Ch +] [Ch –] menu movement, channel selection. [Vol +] [Vol –] menu movement, volume adjustment.
❺ **Guide Button**	Move to the On screen Guide screen.
❻ **Info Button**	Check the current channel number and display the selected menu or detailed information of an item.
❼ **USB**	Connect to external USB devices, such as a keyboard or mouse.
❽ **CableCARD Slot**	Allows CableCARD access.

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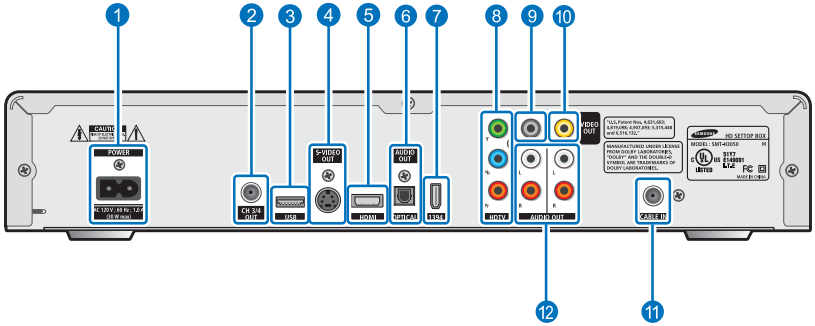
Rear Panel

The port names and functions of the rear panel are described as follows:



Name	Function
❶ **Power**	Connect the power cord to supply AC power to the set-top box.
❷ **CH3/4 OUT**	Connect a coaxial cable to RF 3/4 Out to send analog audio and video signals to a TV or VCR. The audio signal from this output only supports mono audio and the video signal only supports Standard Definition (SD) format.
❸ **USB**	Connect to external USB devices, such as a keyboard or mouse.
❹ **S-VIDEO OUT**	Connect an S-Video cable from S-Video Out to a TV or VCR. Only Standard Definition (SD) format is supported.
❺ **HDMI**	Connect an HDMI cable to an HDMI supported HDTV.
❻ **AUDIO OUT/OPTICAL**	Connect an optical cable to send a digital audio signal to a digital audio device.
❼ **1394**	Connect an IEEE1394 cable to IEEE1394 (Firewire) supported HDTV.
❽ **Y/Pb/Pr Out**	Connect the component output ports to the component input on your HDTV.
❾ **Digital Audio Out**	Connect an RCA cable to send digital audio signal to the digital audio device.
❿ **Video Out**	Connect an RCA cable to send an analog Video signal to the TV or VCR.
⓫ **Cable In**	Connect the coaxial cable that transmits the signal from the Cable Service Provider.
⓬ **Audio Out**	Connect an RCA cable to send an analog Audio signal to the TV or VCR.

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CableCARD™

What is CableCARD?

CableCARD is an STB authorization device, which allows subscribers to watch digitally encrypted programs. CableCARD is inserted by the service provider when a digital broadcasting receiver is installed.

CableCARD USE

Do not remove the CableCARD. CableCARD failure or service disruption may occur.

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INSTALLATION

Follow the instructions below to see how to install the Digital HD STB.

Installation Environment

The proper installation environment for the Set-top box is as follows.

Item	Description
Operation Temperature	32~104 ˚F
Storage Temperature	-4~140 ˚F
Operation Humidity	Equal to or lower than 95% (104 ˚F)
Storage Humidity	Equal to or lower than 98% (140 ˚F)
Power Consumption	Maximum 30 Watts
Rated Input Voltage	AC 120 V, 60 Hz
Channel Input Frequency	54~864 MHz

Product Usage and Installation

Make sure to use the product in an environment conforming to the conditions specified in the above table. Failure to do so may result in product damage or reduction in the product life time.

Connection of Digital Broadcasting Receiver and Peripheral Device

- Make sure to request that the technician check if the power of home appliances such as the TV or VCR are properly grounded. If they are not grounded, there may be the danger of a fire.
- After connecting the video/audio cable, in case of generating excessive heat, call the service center. There may be the danger of a fire.

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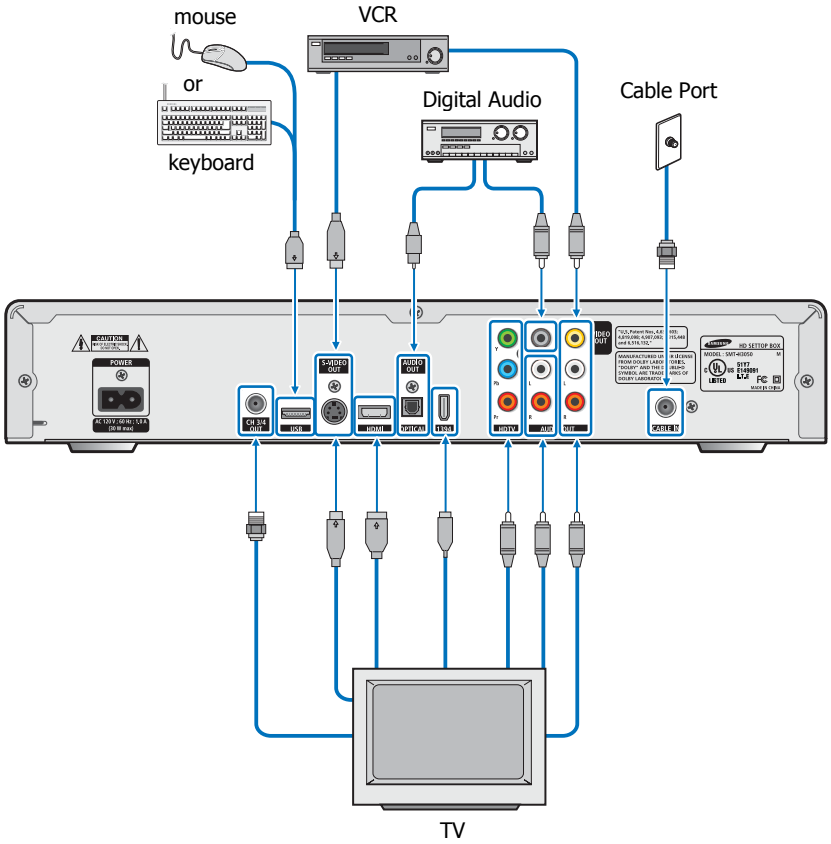
Peripheral Device Connection

The method of connecting the cable and each peripheral device to the digital broadcasting receiver is as follows:



(The product image may differ from the actual product.)

Connection Device	Reference Page	Connection Device	Reference Page
TV	18, 19	Video (VCR)	22
HDMI Cable	20	Coaxial Cable Connection (TV/Cable Broadcasting)	23
Digital Audio	21		

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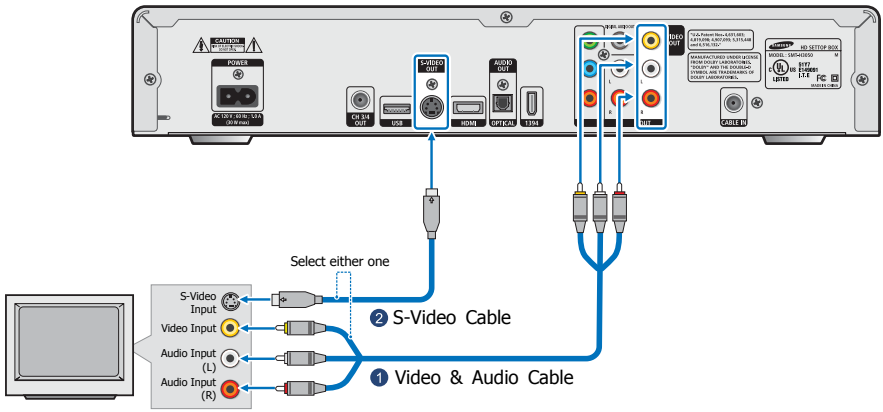
Connection to a TV Having a Composite or S-VIDEO Jack

Below is the method for connecting to a TV having a composite or S-VIDEO jack.



(The product image may differ from the actual product.)

Connection to TV

When connecting to TV, shut off the power of the TV and the digital broadcasting receiver. Refer to the TV User Guide in order to connect the cables more easily.

♦ Video Connection

1. Connection to the **VIDEO OUT** jack
   Using a Video cable, connect the **VIDEO OUT** jack to the **Video Input** jack on the TV.

2. Connection to the **S-VIDEO OUT** jack
   Using an S-video cable, connect the **S-VIDEO OUT** jack to the **S-Video Input** jack on the TV.

♦ Audio Connection

Using the audio cable, connect the **AUDIO OUT (L/R)** jacks on the rear panel to the the **Audio Input (L/R)** jacks on the TV.
Be sure to match the audio jacks with the plugs of the same color.

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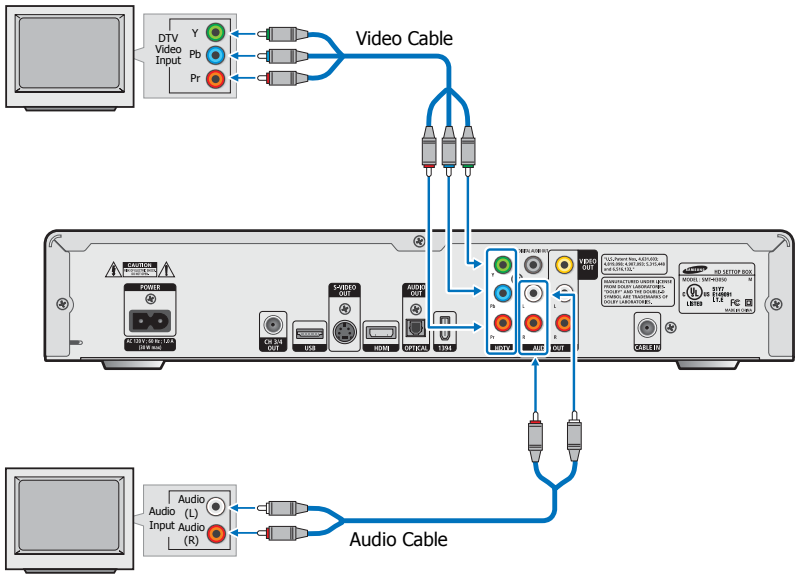
Connection to a TV Having Component Jacks (Y, Pb, Pr)

See below to connect to a TV having a Component port (Y, Pb, Pr).
When connecting the Component Video and Audio cables, be sure to match the jacks to the plugs of the same color.



(The product image may differ from the actual product.)

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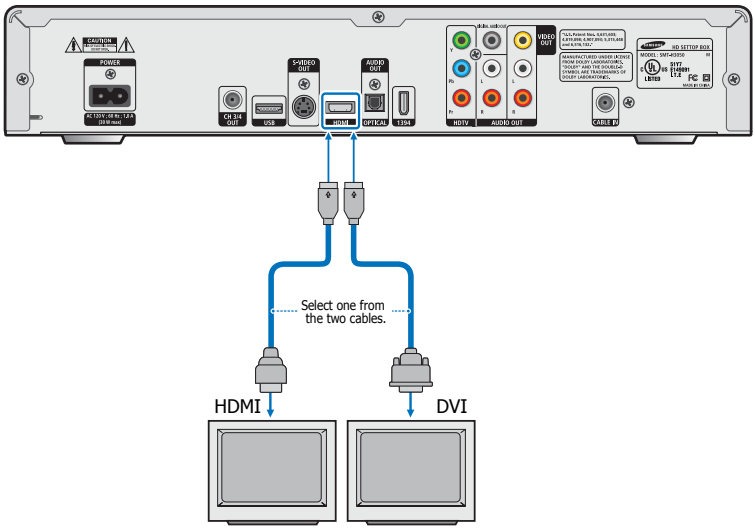
HDMI Cable Connection

This section describes how to connect the television to the set-top box by using an HDMI cable.



(The product image may differ from the actual product.)

♦ HDMI Connection

Connect the **HDMI** port on the rear of the Set-top box with the **HDMI** port of your digital TV by using an HDMI cable. As an HDMI cable carries audio signals, a separate audio connection to your TV is not needed.

♦ DVI Connection

Connect the **HDMI** port on the rear of the set-top box with the **DVI input** port of your digital TV by using the HDMI-DVI conversion cable.
If using a DVI cable, a separate audio connection must also be made.

NOTE

High Definition Multimedia Interface (HDMI)

The HDMI port provides high-definition video and is the highest quality video connection.

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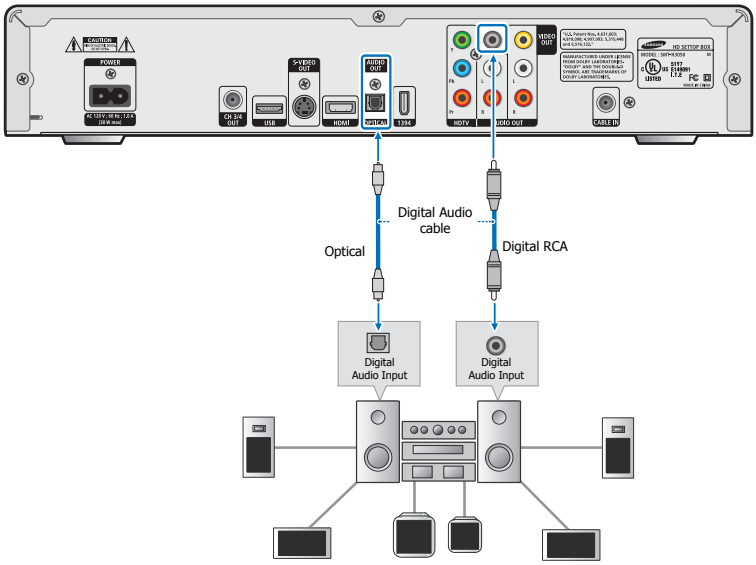
DOLBY Amplifier Connection

See below to connect a receiver amplifier (an amplifier or Home Theater that has a Dolby Digital decoding function).



(The product image may differ from the actual product.)

Using an Optical cable, connect the **Digital Audio Input** port of the Dolby digital amplifier to the **AUDIO OUT OPTICAL** port on rear panel of the STB.
If you do not have an Optical cable, use a regular RCA type audio cable to connect the **DIGITAL AUDIO OUT** port on the STB to the **Digital Audio Input** on the Dolby Digital Amplifier.
Use either connection to enjoy the digital sound of 5.1 channel.

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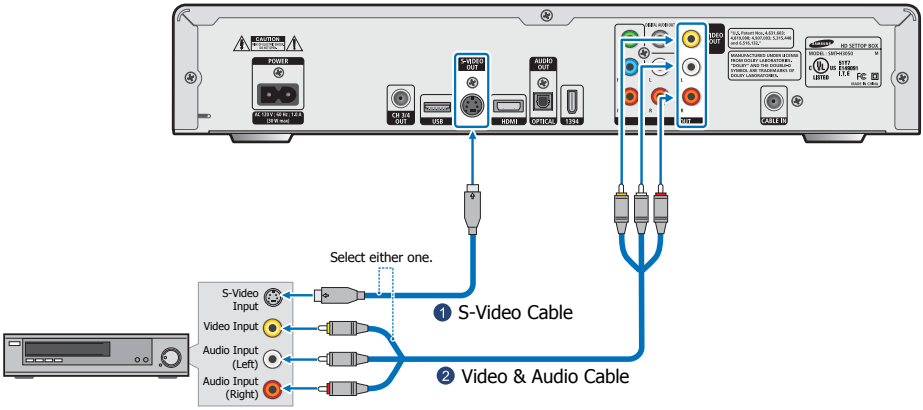
VCR Connection

See below to connect a VCR to the Set-top box.



(The product image may differ from the actual product.)

♦ Video Connection

❶ Connection to S-VIDEO OUT jack

Using an S-video cable, connect the **S-Video Input** jack of the VCR to the **S-VIDEO OUT** jack on the rear panel of the STB.

❷ Connection to VIDEO OUT jack

Using a video cable, connect the **Video Input** jack of the VCR to the **VIDEO OUT** jack on the rear panel of the STB.

♦ Audio Connection

Using the audio cable, connect the **Audio Input (L/R)** jack of the VCR to the **AUDIO OUT (L/R)** jack on the rear panel of the STB. Be sure to match the audio jacks with the plugs of the same color.

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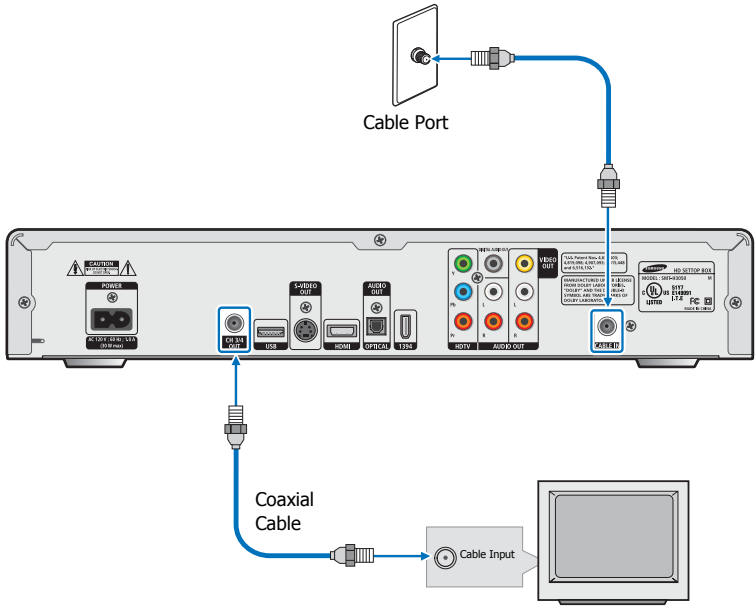
Coaxial Cable Connection

This section describes how to connect your cable service to the Set-top box by using a coaxial cable.



(The product image may differ from the actual product.)

Connect one end of the cable to **CABLE IN** jack of the Set-top box, and connect the other end of the cable to the **Cable Port** inside your home.
The CH3/4 OUT jack should be connected to the **Cable Input** jack of your television.

When connecting the digital broadcasting receiver with the coaxial cable

Before connecting the coaxial cable to the digital broadcasting receiver, request the installing technician to check if the coaxial cable is grounded. If the cable is not grounded, there may be the danger of a fire.

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BASIC SETTING

After connecting power to the STB, if the time is displayed on the Front Panel Time/Channel display screen, the booting is completed.

Rebooting procedure

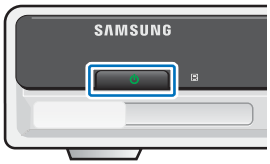
1. By pressing the three **[INFO]**, **[VOL-]**, **[VOL+]** buttons simultaneously, STB will be rebooted.

2. When the time is displayed on the Time/Channel display screen, then the booting is completed.

HD Resolution setting procedure

When the TV connected to the STB does not support automatic resolution setting, the STB resolution must be set manually by using the STB Front Panel button. The basic resolution of the STB is 1080I.

1. In the Standby mode, press **[Active/Standby]** button once.



2. The current resolution is displayed while blinking in the Time/Channel display screen. Then, press the **[INFO]** button.

3. HdSr is displayed, and the resolution can be changed selected by pressing the following buttons.
   - **[VOL+]**: 1080I **[VOL-]**: 720P
   - **[CH+]**: 480I **[CH-]**: 480P

4. When the resolution is selected, save by pressing the EXIT button. Set is displayed in the Time/Channel display screen.

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TROUBLESHOOTING

This section describes possible problems you may experience when using the set-top box. If any problem occurs, please check the following cases first.
If the problem is not solved by following the methods below, please contact your local cable provider for technical support.

The TV screen does not appear.	1. Check if the power of the TV and Set-top box are turned on. 2. Check if the cable is connected to the 'Cable Input' jack. 3. Check if the STB is selected as the TV's source. 4. If the CH3/4 OUT port is connected to an analog TV, check if the basic channel number (CH 3) and the external channel number of the TV match.
The remote control does not operate.	1. Check if the remote control is suitable for use with the STB. 2. Check if the remote control operates normally after changing the batteries. 3. Check if the batteries are inserted correctly in the remote control. 4. Check if any obstacle exists between the STB and the remote control. 5. Check if the remote control operates normally when used at a close distance.
No sound is emitted in the TV or the audio.	1. Check if the audio jacks of the TV are properly connected to the audio output jacks of the STB. 2. If the audio cable is connected properly, check if the mute function is set. If the mute function is set, press the **[Mute]** button of the remote control in order to release the mute function.

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APPENDIX

Specifications

Category	Description
Video Output	Composite (RCA), Component (RCA), S-Video
Audio Output	Stereo L/R (RCA), SPDIF Optic, SPDIF PCM (RCA)
Video/Audio Output	HDMI, IEEE1394
USB	USB 2.0
OOB (Out of Band)	**FDC (Forward Data Channel)** - RF Input Tuning Range: 70 MHz to 130 MHz. - RF Input level range: -15 to +15 dBmV - Format: SCTE 55-1, 55-2 **RDC (Reverse Data Channel)** - RF Output Frequency Range: 5 MHz to 42 MHz. - Transmit level range: +26 to +60 dBmV - Encoding: QPSK
DSG (DOCSIS Set-top Gateway)	**Downstream** - RF Input Tuning Range: 88 to 860 MHz - RF Input Modulation: 64QAM/256QAM - RF Input level range: -15 to +15 dBmV **Upstream** - RF Output Frequency Range: 5 MHz to 42 MHz. - RF Output Modulation: QPSK/16QAM - Transmit level range: +8 to +60 dBmV
Rated Input Voltage	AC 120 V, 60 Hz
Power Consumption	Maximum 30 Watts
Operation Temperature	32~104 ˚F
Size (inch)	13.78 (Width) × 9.84 (Depth) × 2.36 (Height)

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Cable Specifications

Category	Description
Channel Input Frequency	54 MHz to 864 MHz
Cable Input Signal level Range	-15 to +15 dBmV
Cable Input Signal Modulation	64QAM/256QAM, NTSC Analog
CH 3/4 Output Signal	NTSC Analog. 3/4 Channel

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